

## A. Introduction

1. Inflation Solves 3 Problems
2. The reach of inflation

## B. Science Motivation

1. Inflation Cosmology
  - a. Inflation Physics
  - b. Cosmological Observables
    - i. Quantum Fluctuations
    - ii. Scaler and Tensor Perturbations
2. Testing Inflation with the CMB
  - a. B-mode polarization
  - b. Spectrum
  - c. Non-gaussianity
  - d. Other probes
3. Probing Fundamental Physics
4. Connection to Structure
5. Galactic Astrophysics

## C. CMBpol Experiments

1. Current Status
  - a. Experimental History
  - b. Experiments
  - c. Technology
  - d. Limitations
2. Space Mission
  - a. Observation Goals
  - b. Three Designs (LC, intermediate, Comprehensive)
  - c. Sensitivity and Systematics
  - d. Design Schedule

## D. Plan for the Decade

1. Current Experiments
  - a. Maturing Technology
  - b. Analysis and data volume
  - c. Experiment maturity
2. Detector and Technology Development
3. New Experiments
4. Start for Space Mission